A Constraint-based and Head-driven Analysis of Multiple Nominative Constructions*

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1 Issues

The so-called 'double' or 'multiple' nominative constructions (henceforth DNC or MNC) exemplified by (1) have been one of the puzzling phenomena in topic-prominent languages like Korean, Japanese, and Chinese (Japanese examples are from Takahashi 1994).[1]

(1) a. K: John-i   emeni-ka   chincelha-si-ta.
       John-NOM mother-NOM kind-NOM-DECL
       'It is John whose mother is kind.'

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[1]There are several other types of double nominative constructions that we do not discuss in this paper:

(i) a. John-i   son-i   khu-ta
       John-NOM hand-NOM big
       'John's hand is big.'

    b. John-i   tongsayng-i   mipta.
       John-NOM brother-NOM hate
       'John hates his brother.'

Cases like (ia) are often called 'inalienable' double nominative constructions because of the tight whole-part relationship between *John* and *hand*. Cases like (ib) are psych constructions. These two constructions are basically different from the focus double nominative constructions we are dealing with in this paper. See O'grady (1991) and Kim (2000) for further discussion.

b. J: Usagi-ga mimi-ga naga-i.
rabbit-NOM ear-NOM naga-i
'It is rabbits whose ears are long.'

One intriguing property of the DNCs is that there is no conceptual limit to the number of nominative marked phrases. For example, there are four nominative phrases in (2a).

(2) a. K: John-i chinkwu-ka apeci-ka ton-i manh-ta.
John-NOM freind-NOM father-NOM money-NOM many
'It is John's friend's father who has lots of money.'

b. J: Ken-ga imooto-ga se-ga taka-i.
Ken-NOM sister-NOM height-NOM tall-PRES
'It is Ken whose sister is tall.'

Some of the important constraints existing in MNCs are (a) the two consequitive nominative phrases need to be in a certain semantic (e.g., subordinate relation. See section 4.1) relation and (b) the specifier value of the noninitial nominatives requires to be unsaturated (which is unusual in that the presence of a specifier is quite free in the language). The violation of these constraints results in the ungrammaticality as shown in (3a) and (3b) respectively.

(3) a. Pyeng-uy/-*i akhwak-ka i kyolkwa-lul cholayhayessta.
illness-GEN/NOM worsening this result caused
'The worsening of the illness caused this condition.'

b. John-i *Mary-uy/*ku yeca-uy/*ku chinkwu-ka chakhata.
John-NOM Mary-GEN/that girl-GEN/that friend-NOM honest
'It is John whose girl friend is honest.'

Various attempts have been made to account for such constructions, but few has been satisfactory. This paper provides a constraint-based analysis for the formation of such double or multiple nominative constructions, adopting the recent theory of information packaging developed by Engdahl and Vallduví (1996) and the mechanism of argument composition (cf. Chung 1998).

2 Grammatical Properties of Nominative Phrases

2.1 Are They All Subjects?

Let us first examine the grammatical status of the nominative elements. Various subject-sensitive phenomena such as honorification, binding, control, plural copy-

ing, and so forth, indicate that the immediate preverbal nominative NP carries the canonical properties of the grammatical subject (cf. O'grady 1991).

Though the notion of honorification is a pragmatic one, it could be used as a reliable test for the subjecthood of a phrase. The contrastive data in (4) show that only the preverbal NP induces honorification:

(4) a. John-i   **kyoswu-nim-i**   tolaka-*(si)-essta.
       John-NOM professor-HON-NOM pass.away-HON-DECL
       'It is John whose teacher passed away.'

   b. **Sensayng-nim-i**   sonca-ka   yeyppu-(*si)-ta.
       teacher-HON-NOM grandchildren-NOM pretty-HON-DECL
       'It is the teacher whose grandchild is pretty.'

Similar support can be found with the occurrence of the nominative honorific marker *-kkeyse* that can be attached only to the grammatical subject, as shown from the following contrast:

(5) a. **Sensaygnim-kkeyse** sonca-ka   mikwuk-eyse
       teacher-HON.NOM   grandchild-NOM US-from

       tolao-(*si)-ess-ta.
       return-HON-PST-DECL
       'It is the teacher's son who returned from US.'

   b. Tom-i   **apeci-kkeyse**   mikwuk-eyse tolao-*(si)-ess-ta.
       Tom-NOM father-HON.NOM US-from   return-HON-PST-DECL
       'It is Tom's father who returned from US.'

The behavior of the anaphor *caki*, known as the subject-oriented reflexive, also manifests the subjecthood of the preverbal nominative. The binder of the anaphor in (6) is not the first NP but the preverbal nominative NP.

(6) John$_j$-i   sonca$_i$-ka   caki$_{i/*j}$ pan-eyse   ceyil yeypputa.
    John-NOM grandchild-NOM self   class-LOC most pretty
    'It is John whose grandchild is the prettiest in her/his class.'

Equi constructions provide another case for the subjecthood property of the second nominative NP: the unrealized subject of the embedded clause in (7) is controlled not by the first but by the second NP.

(7) Mary-ka   tongsayng$_i$-i [PRO$_i$ yeyppu-e   cilye-ko]   nolyekhayessta.
    Mary-NOM sister   PRO   pretty-MRK become-COMP tried
    'It is Mary whose sister tried to be pretty in the face.'

The plural copying process in Korean allows the plural marker *tul* to be attached to any phrases following a plural subject. The plural marker in the second nominative in (8b) can trigger its re-occurrence on the adverbial element *acwu* 'very'. But, in (8c), we can observe that the plural marker in the first nominative cannot trigger another plural marker on the adverb. This again tells the subjecthood of the preverbal nominative phrase.

(8) a. John-i yele **chayk-tul-ul** mahi-(*tul) ilkessta.
John-i many book-PL-ACC many-PL read
'John read various books a lot.'

b. John-i   **chinku-tul-i**   acwu-tul chakha-ta.
John-NOM friends-PL-NOM very-PL honest-DECL
'It is John whose friends are honest.'

c. ??/***Haksayng-tul-i** emeni-ka   acwu-tul cohusita.
students-PL-NOM   mother-NOM very-PL honest-DECL
'It is students whose mothers are really kind.'

In sum, the subject-sensitive phenomena of honorification, binding, control and plural copying suggest that the preverbal nominative NP functions as gramamtical subject, whereas the initial nominative NP does not.

2.2   Focus Properties of the Non-preveral Nominative Phrases

As we have observed, the sentence initial nominative phrase fails to go through the standard subjecthood tests. If the initial NP has no grammatical function despite its nominative case suffix, the question that follows is then what is its grammatical status. Semantically the referent of the sentence initial NP in DNCs has the property of being in the situation described by the rest of the sentence. This has lead the traditional idea (both in Japanese and in Korean) that the initial nominative element is an argument of the so-called 'sentential predicate' consisting of the preverbal subject and the predicate (see Park 1981 for Korean and Heycock 1993 for Japanese). In this respect, several analyses have taken the sentence initial nominative phrase to be 'another' subject. However, as we observed, the first nominative in the DNC does not bear the properties of a subject.

Closer examination reveals that the sentence-initial nominative is the realization of information focus, as hinted by previous literature (Yoon, J.M. 1989, Yoon J.R. 1989, O'grady 1991, Lee 1994, Schütze 1996, Yang 1999, among others). I assume that the marker *i/ka* has two functions: in addition to its nominative case marker function, it serves as a discourse focus marker. I thus suggest that there are at least three realizations of *i/ka* marker as given in (9).

(9)

a. $\begin{bmatrix} \textit{marker} \\ \text{MARKING i/ka} \\ \text{CASE nom} \end{bmatrix}$
b. $\boxed{1}\begin{bmatrix} \textit{marker} \\ \text{MARKING i/ka} \\ \text{FOCUS } \boxed{1} \end{bmatrix}$
c. $\boxed{1}\begin{bmatrix} \textit{marker} \\ \text{MARKING i/ka} \\ \text{CASE nom} \\ \text{FOCUS } \boxed{1} \end{bmatrix}$

The nominative marker of 'John-i' in (10a) where the object is scrambled to the sentence initial position and function as a focus phrase is an instance of (9a) and the nominative 'John-i' in (10b) where the canonical subject stays in situ can be an instance of (9c).[2] The nonpreverbal nominative NPs in DNCs/MNCs are thus instances of (9b).

(10) a. Mary-lul John-i manasse.
    Mary-ACC John-NOM met
    'It is Mary that John met.'

   b. John-i Mary-lul manasse.
    'It is John who met Mary.'

The evidence that the nominative marker of the sentence initial phrase in DNCs is solely a focus marker comes from several phenomena. One obvious point we can observe is that only the first *i/ka* marked phrase can be wh-questioned, as shown in (11a). It is not allowed to wh-question the second one as shown in (11b).

(11) a. Nwu-ka   apeci-ka   kyoswu-i-si-ni?
    who-NOM father-NOM professor-COP-HON-Q
    '(lit.) Who is it whose father is a professor?'

   b. *John-i   nwu-ka   kyoswu-i-si-ni?
    John-NOM who-NOM professor-COP-HON-Q
    '(lit.) John's 'who' is a a professor?'

Comparison between sentences with the initial nominative phrase and those with the initial genitive phrase (which have often been claimed to be source sentences of DNCs/MNCs) further tells us the focus property of the initial nominative phrase. A double nominative sentence like (13) could be an appropriate answer only for a question with the initial nominative wh-phrase like (12a).

(12) a. A: Nwu-ka apeci-ka   kyoswu-i-si-ni?
    who-NOM father-NOM professor-COP-HON-Q

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[2]Cases like (10b) are often called a 'presentational focus sentence'.

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b. A: Nwuku-uy apeci-ka   kyoswu-i-si-ni?
   who-GEN   father-NOM professor-COP-HON-Q

(13) B: John-i   apeci-ka   kyoswu-i-si-ta.
   John-NOM father-NOM professor-COP-HON-Q
   '(lit.) Who is it whose father is a professor?'

Cleft constructions also indicate that the first nominative NP functions as an independent focus phrase. Only when the first NP is in nominative could this NP be clefted as shown in (14a) and (14b).

(14) a. John-i/uy   kompwute-ka   kocangnassta.
     John-NOM/GEN computer-NOM broke
     'It is John whose computer is out of order.'

   b. Kompwute-ka   kocnagna-n salam-un   John-i-ta.
     computer-NOM broken-PN man-TOP John-COP-DECL
     'The man whose computer is broke is John.'

A focus marking delimiter can be attached to the sentence initial NP when serving as an answer to the question (12a). Note that a sentence like (15) could not be an answer to the genitive wh-phrase question (12b).

(15) Tom-to   apeci-ka   kyoswu-i-si-ta.
   Tom-also father-NOM professor-COP-HON-DECL
   'It is also Tom whose father is a professor.'

Further, the first nominative (unlike the genitive NP) has an exhaustive reading, a canonical property of focus. The impossibility of having the exclamatory expression *ceki* 'here' in (16a), which is generally used not for exhaustive listing but for neutral description, could be attributed to the exhaustive list reading of *John-i* (cf. Kuno 1973, Yoon J.R. 1989).

(16) a. *Ceki   John-i   apeci-ka   o-si-nta!
     over.there John-NOM father-NOM come-HON-DECL

   b. Ceki   John-uy   apeci-ka   osinta!
     over.there John-GEN father-NOM come-HON-DECL

A similar point can be made with the definiteness of the initial phrase. It is not allowed to have an indefinite pronoun as the initial nominative one:[3]

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[3]The sentence is grammatical with a 'specific' reading.

(17) *Etten salam-i   apeci-ka   pwuca-i-si-ta.
      some   person-NOM father-NOM rich-COP-HON-DECL
      '(lit.) It is some person whose father is rich.'

Based on these observations, I claim that the nominative marker in the nonpreverbal NPs of DNCs/MNCs has nothing to do with its subjecthood, but instead just indicates its focus status. The *i/ka* marker has thus dual functions: it serves as a nominative marker or as a focus marker.

The treatment of the first *i/ka* marked NP as a focus phrase rather than as a subject would predict the possibility of attaching the focus marker to a case marked sentence-initial element, as seen from the contrast in (18a) and (18b) (cf. Schütze 1996).

(18) a. **Seoul-lopwuthe-ka** ku-somwun-i   phyecyessta.
        Seoul-LOC-FOC   that rumor-NOM spread
        'The rumor came out from Seoul.'

     b. *John-i   **Mary-eykey-ka** chayk-ul   cwuessta.
        John-NOM Mary-DAT-FOC book-ACC gave

3   Previous Approaches

3.1   Movement Analyses

There have been two main approaches for the analysis of DNCs/MNCs, neither of which has been satisfactory: movement and base-generation analyses. The movement analysis (Kang 1986, Yoon, J.-Y. 1989, among others) has assumed that examples like (1) are derived from a genitive counterpart through adjunction movement processes from (19a) to (19c):

(19) a. $_{IP}[_{NP_i}$[John-uy emeni-ka] $_{VP}$[chincelha-si-ta]].
     b. $_{IP}[_{NP_j}$[John-uy emeni-ka] $_{IP}[_{NP_i}$[t] $_{VP}$[chincelha-si-ta]]]
     c. $_{IP}[_{NP_k}$[John-i] $[_{IP}[_{NP_j}$[[t] emeni-ka] $_{IP}[_{NP_i}$[t] $_{VP}$[chincelha-si-ta]]]]]

Though this derivational analysis could well reflect the fact that the predicate is semantically one-place, subcategorizing for a single nominative NP, there exist nontrivial problems. One immediate issue concerns subjacency, as observed from the structures in (19). The only way to avoid a subjacency violation in moving out the genitive NP is to adjoin it to the IP and then to move out the internal element. Though one might justify such a movement analysis even for more complicated DNCs/MNCs, a further complication arises from idiomatic expressions, as noted by Park (1981) and Yoon (1986).

(20) a. [John-uy pal-i] nelpta.
John-GEN foot-NOM wide
'John's foot is wide.'

b. John-i pal-i nelpta.
John-NOM foot-NOM wide
'John knows a lot of people.' (plus a literal meaning)

In the movement analysis, (20b) would be derived from (20a). The issue is that the source sentence has only a literal meaning whereas the output (20b) has both a literal and an idiomatic reading. Unless revising the standard assumption that idiomatic readings cannot be derived, we cannot avoid such an anomalous derivation.

There are other cases inducing clear differences between genitive and nominative constructions. For example, whereas it is possible to have an intervening adverb between two *i/ka* focused phrases but not possible between a genitive and a nominative:

(21) John-*uy/i ecey apeci-ka tolakasiessta.
John-GEN yesterday father-GEN/NOM passed.away
'It is John whose father passed away last night.'

As noted in Na and Huck (1993) and others, there exist no corresponding counterparts between a genitive and a nominative:

(22) Kkoch-i/*-uy kwukhwa-ka olaykan-ta.
flowers-FOC/GEN chrysanthemum-NOM last.long
'As for flowers, chrysanthemums last long.'

Further, not all predicates can take DNCs or MNCs: stage level predicates like *ka-ta* 'go' do not participate in DNCs (cf. Lee 1994).

(23) *John-i apeci-ka ka-si-ess-ta.
I-FOC father-NOM go-HON-PST-DECL

Given the assumption that DNC or MNCs were derived from a genitive counterpart, we would not expect such a difference. A strict restriction on the type of predicate is required.

3.2 Base-Generation Approaches

The base generation approach (Park 1986, O'Grady 1991), whose typical structure for (1) is given in (24) is not free from problems, either.

(24) $_{IP}[_{NP_i}[\text{John-i}]\ _{IP}[_{NP_j}[(pro)\ \text{emeni-ka}]\ _{VP}[\text{chincelha-si-ta}]]]$.

One crucial property such a base generation approach misses is the tight syntactic and semantic relation between the NP_i and NP_j. One could assume a *pro* in the NP_j position, while relegating the relation to the pragmatics/semantics (cf. Kang 1988). Even if we found a way of defining this relation, the issue of locality still remains. The two NPs are in different local trees. Without expanding the domain of locality, it is difficult to state what license the first NP and what the relationship is between the two nominatives, in addition to the question of the proper interpretation of *pro*.

4 A Head-driven, Constraint-Based Approach

4.1 Double Nominative Constructions

To capture the grammatical properties of each noun phrase in DNCs or MNCs while avoiding the problems that the previous literature has encountered, I provide a more fine-grained analysis of DNCs/MNCs couched in the theory of HPSG. The gist of the proposed analysis has three parts: it first assumes that Korean employs base-generated gapless topic/focus constructions. More specifically, I take (25) to be a schema that characterizes a type of well-formed phrases in Korean.

(25) Head-Focus Schema (to be revised):

$$\text{S}\Big[\text{INFO-STR}\,|\,\text{FOC}\ \langle\boxed{1}\rangle\Big]\Rightarrow \boxed{1}\text{NP}\begin{bmatrix}\text{MARKER i/ka}\\ \text{FOCUS}\ \langle\boxed{1}\rangle\end{bmatrix},\quad \text{S}\Big[\text{SPR}\langle\boxed{1}\rangle\Big]$$

The schema (25) simply says that a focused phrase with the focus particle *i/ka* and a sentence still looking for a specifier form a well-formed sentence. In fact, the selected specifier will structure-share with the specifier of the subject within the S. I thus suppose that unlike English but similar to Catalan, focus in Korean can be signaled by syntactic position as well as by the focus marker *i/ka*. To integrate this focus information into grammar, I adopt Engdahl and Vallduví's (1996) idea that the feature attribute INFO-STR(UCTURE)|FOC(US) controls the information structure of a given sentence and its structural realization.[4] In addition, I assume that verb lexemes in Korean could be realized as those in (26) (either through a lexical rule or by a general constraint).

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[4]The notion of FOCUS used here is 'informational focus', borrowed from Engdahl and Vallduví (1996).

(26)
$$
\begin{bmatrix}
\textit{individual-level-v-word} \\
\text{SPR } \langle\, (\boxed{1}_i)\,\rangle \\
\text{SUBJ}\langle \text{N}'_j\big[\text{SPR } \langle(\boxed{1})\rangle\big]\rangle \\
\text{INFO-STR}\,|\,\text{FOC } \langle\boxed{1}\rangle \\
\text{CONT}\,|\,\text{RESTR } \left\langle ...,\; \begin{bmatrix} \text{RELN } \textit{subordinate} \\ \text{ARG1} \qquad i \\ \text{ARG2} \qquad j \end{bmatrix}, ... \right\rangle
\end{bmatrix}
$$

The effect of the constraint in (26) is simple: it first allows a verb taking an un-saturated nominal subject to have a specifier which is identified with the subject's specifier.[5] Coupled with the schema in (25), the lexical realization in (26) thus has a pragmatic effect: it makes the specifier(marked with the focus particle) as an informational focus. For example, the verb *chincelha-si-ta* 'kind-HON-DECL' could be realized as a verb taking one *i/ka* marked focus specifier and a nominative subject as represented in (27).[6]

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[5]Unlike English, the specifier value in Korean is optional as in (i).

(i) Haksayng-i   o-ass-ta.
    student-NOM come-PST-DECL
    'A student came.'

Further, Korean noun phrases are free to add something else (specifier):

(ii) John-uy   ku kanguy-uy maylyuk
     John-GEN the lecture   attraction
     '(lit.) John's that lecture's attraction'

Fukui (1986) parallels the possibility of stacking genitive phrases with that of generating multiple nominatives in Japanese.

[6]Various constituent tests such as cleft constructions show that the two nominatives do not form a constituency, as hinted from the difference from genitive sentences; no *pro* element can substitute these two; the two nominative phrases cannot be elliptical answers.

(27)

$$
\begin{array}{c}
\text{S} \\
\left[\begin{array}{l}\textit{head-focus-ph} \\ \text{FOCUS } \langle\boxed{2}\rangle\end{array}\right]
\end{array}
$$

Tree structure:

- S $\left[\begin{array}{l}\textit{head-focus-ph} \\ \text{FOCUS } \langle\boxed{2}\rangle\end{array}\right]$ branches into:
  - $\boxed{2}\text{NP}_j$ $\left[\text{FOCUS } \langle\boxed{2}\rangle\right]$ — John-i
  - S $\left[\begin{array}{l}\textit{head-subj-ph} \\ \text{SPR } \langle\boxed{2}\rangle\end{array}\right]$ branches into:
    - $\boxed{1}\text{N'}_i[\text{SPR } \langle\boxed{2}_j\rangle]$ — emeni-ka
    - VP
      - V $\left[\begin{array}{l}\text{HEAD } \textit{verb} \\ \text{SPR } \langle\boxed{2}\rangle \\ \text{SUBJ } \langle\boxed{1}\text{N'}_i\left[\text{SPR } \langle\boxed{2}\rangle\right]\rangle \\ \text{COMPS } \langle \quad \rangle\end{array}\right]$ — chincelha-si-ta
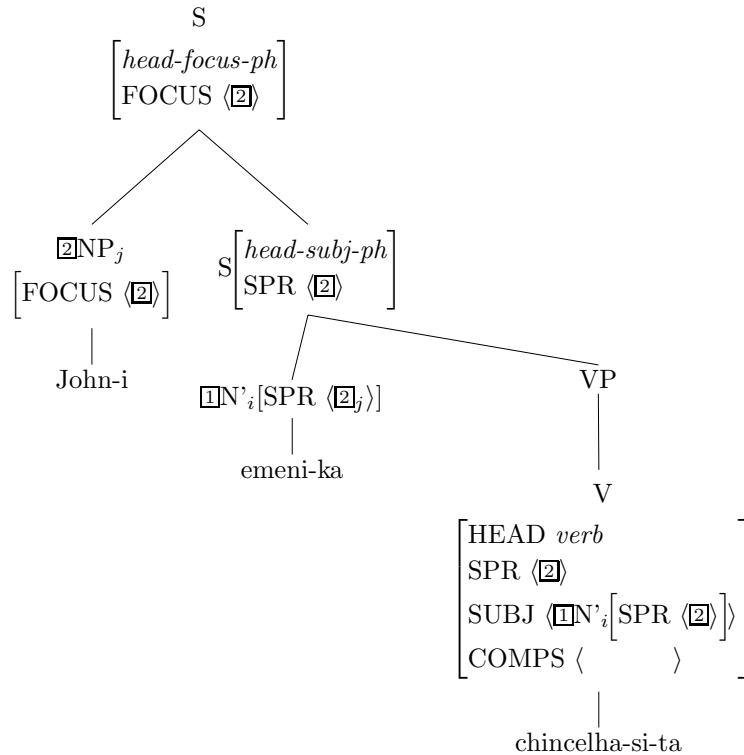
In addition, the lexical entry in (26) specifies that the verb should be a type of *individual-level-v-word*. This is to capture the generalization that only individual level predicates occur in DNCs/MNCs as in (28). We thus cannot have double or multiple nominative constructions with verbs such as *talli-ta* 'run' or *kongpwuhata* 'study'.

(28) a. */??John-i apeci-ka   talli-si-ess-ta.
      John-NOM father-NOM run-HON-PST-DECL
      'It is John's father who ran.'

    b. */?? John-i tongsayng-i   kongpwuha-n-ta
      John-NOM brother-NOM study-PRES-DECL
      'It is John's brother who is studying.'

The lexical entry in (26) also specifies that the subject must be in a 'subordinate' relation with its unsaturated specifier. The term 'subordinate' relation here, borrowed from Na and Huck (1993), is defined as in (29).[7]

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[7]Na and Huck (1993) classify this subordination relation into five: *part-whole* (e.g., cover vs. book, voice, vs. man, tail vs. dog), *quality-to-entity* (e.g., use vs. tool, color vs. eyes, taste vs.

(29) X is thematically subordinate to an entity Y iff Y's having the properties it does entails that X has the properties it does.

This semantic constraint is intended to prevent examples like (30).

(30) a. Yangccok-*i/uy   pwulsin-i   i sathay-lul   cholayhayessta.
        both.sides-FOC/GEN mistrust-NOM this state-ACC caused
        'The mistrust between the two sides caused this state.'

    b. Kumli-*ka/uy   halak-i   cwusik sicang-ul
        interest-FOC/GEN decrease-NOM stock market-ACC

        hwalsenghwahayessta
        boosted
        'The decrease in (bank) interests boosted the stock market.'

For example, there exists no 'subordinate' relation either between *yangccok* 'both sides' and *pwulsin* 'mistrust' or between *halak* 'decrease' and *kumli* 'interest' since having the property of 'interest' does not entail having the property of 'decrease'.

   This analysis thus straightforwardly captures the grammatical/functional properties of each nominative element, while describing the close specifier-head relation between the two nominatives without violating the locality principle.

4.2   Multiple Nominative Constructions

Given the assumption that Korean is a multiple focus language (cf. Choe 1995), our focus treatment predicts the existence of constructions with multiple *i/ka* marked phrases. The examples are repeated here in (31).

(31) a. John-i   chinkwu-ka apeci-ka   pwuca-i-ta.
        John-NOM friend-NOM father-NOM rich-COP-DECL
        'It is Seoul whose summer weather is hot.'

    b. John-i   elkwul-i oynccok-i alay-ka   aphuta
        John-NOM face-NOM left-NOM bottom-NOM sick
        'John is sick in the face on the right side in the bottom.'

   To allow more than one focus and specifier elements, we first need to revise the Head-Focus Schema in (25) and the constraint on verbs in (26) as the ones in (32) and (33) (the boxed letter means an empty or nonempty list).

food), *conventional* (e.g., car vs. man, dog vs. girl, hat vs. boy, nest vs. bird), *hierarchical* (e.g., parent vs. child, doctor vs. patient), and *taxonomic* (e.g., apple vs. fruit, chair vs. furniture, shirt vs. clothes, soccer vs. game) relation.

(32) Head-Focus Schema (final):

$$\text{S}\begin{bmatrix}\text{SPR } \boxed{B} \\ \text{FOC } \langle\boxed{1}\rangle \oplus \boxed{A}\end{bmatrix} \Rightarrow \boxed{1}\text{NP}\begin{bmatrix}\text{MARKER i/ka}\end{bmatrix}, \quad \text{S}\begin{bmatrix}\text{FOC } \boxed{A} \\ \text{SPR}\langle\boxed{1}\rangle \quad \oplus \quad \boxed{B}\end{bmatrix}$$

(33)
$$\textit{individual-level-v-word} \rightarrow \begin{bmatrix}\text{SPR } \boxed{A} \\ \text{SUBJ}\langle\text{NP}\begin{bmatrix}\text{SPR } \boxed{A}\end{bmatrix}\rangle\end{bmatrix}$$
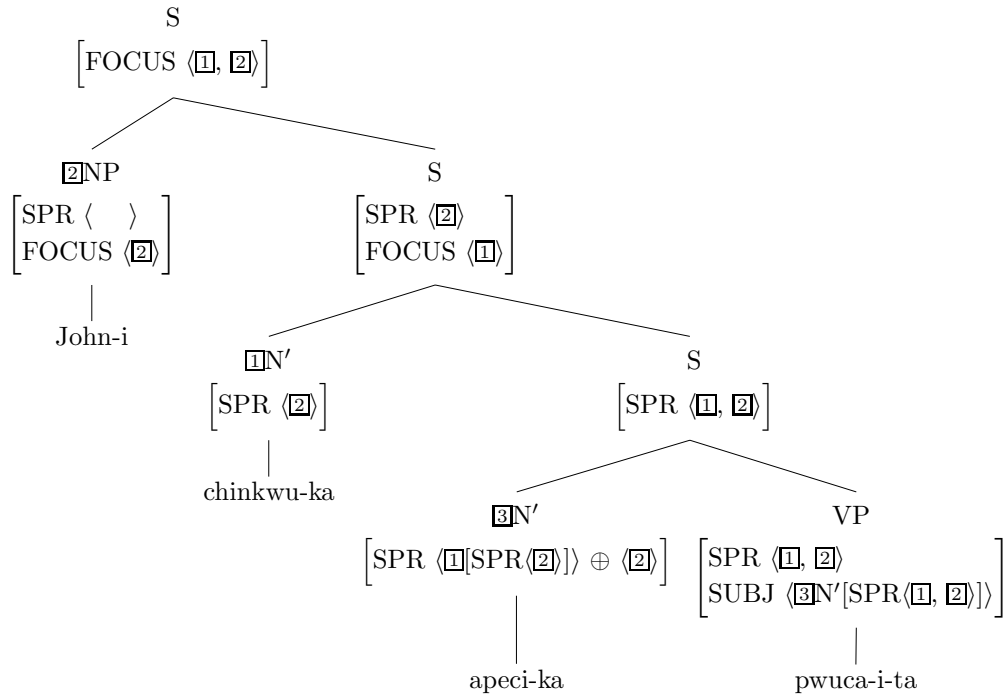
These revised, simplified versions will allow a sentence with a focused phrase still to combine with another focused phrase and a verb to have more than one specifier.

   Together with these revisions, I attribute the freedom of adding nominative elements to the properties of nominative elements, as represented on the constraint on the lexeme *noun* given in (34).

(34) $noun \rightarrow \begin{bmatrix}\text{SPR } \langle[\text{SPR } \boxed{A}]\rangle \oplus \boxed{A}\end{bmatrix}$

This constraint, adopting the mechanism of argument composition (cf. Chung 1998), is relevant to the noun's SPR (specifier value) and allows that when a nominal head requires a specifier, it inherits this specifier's valence (SPR) requirement too. This system, combined with the Head-Focus Schema and the constraint on verbs, will leave the possibility of the top S to still look for another *-i/ka* focused phrase. For example, the present system would assign the structure (35) for the sentence (31a):

(35)

S
$\left[\text{FOCUS} \langle \boxed{1}, \boxed{2} \rangle \right]$

$\boxed{2}$NP
$\left[\begin{array}{l}\text{SPR} \langle \ \ \rangle \\ \text{FOCUS} \langle \boxed{2} \rangle\end{array}\right]$

John-i

S
$\left[\begin{array}{l}\text{SPR} \langle \boxed{2} \rangle \\ \text{FOCUS} \langle \boxed{1} \rangle\end{array}\right]$

$\boxed{1}$N′
$\left[\text{SPR} \langle \boxed{2} \rangle \right]$

chinkwu-ka

S
$\left[\text{SPR} \langle \boxed{1}, \boxed{2} \rangle \right]$

$\boxed{3}$N′
$\left[\text{SPR} \langle \boxed{1}[\text{SPR}\langle \boxed{2} \rangle] \rangle \oplus \langle \boxed{2} \rangle \right]$

apeci-ka

VP
$\left[\begin{array}{l}\text{SPR} \langle \boxed{1}, \boxed{2} \rangle \\ \text{SUBJ} \langle \boxed{3}\text{N}′[\text{SPR}\langle \boxed{1}, \boxed{2} \rangle] \rangle\end{array}\right]$

pwuca-i-ta

In the structure (35), the second NP as well as the first one is focused, though weaker than the first. This structure is similar to a multiple specifier or an adjunction analysis (cf. Kang 1986, Yoon, J.Y. 1989 among others), but it differs from the previous work in several manners. For example, my analysis clearly states the existing constraints in each nominative phrase and their tight interactions in various respects.

5   Conclusion

Peculiar properties of double nominative or multiple nominative constructions have provided many puzzles. In this paper I provided a 'head-driven' and 'constraint-based' analysis in the sense that the lexical head and the tight interaction among declarative constraints play a crucial role in the formation of puzzling DNCs/MNCs. This analysis has captured the gramamtical/functional properties of each nominative phrase in a precise way, while describing the close specifier-head relation between the two consecutive nominatives without violating the locality principle. The analysis eventually allows us an explicit grammar for generating DNCs/MNCs. This has been achieved through the familiar mechanism of argument composition and constraints

on the lexical heads such as noun and verb.

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